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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHAU, PETER P

ART UNIT

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2419

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,762	Applicant(s) BOLLE ET AL.	
	Examiner PETER CHAU	Art Unit 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 1, 2 and 6-8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-10 have been examined and are pending.

Response to Arguments

2. Applicant's arguments, see pages 7-10, filed on 12/29/2008, with respect to the rejection(s) of claim(s) 1-9 under Flavin and Maggio and Shaohua have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made in view of Applicant's Admitted Prior Art (AAPA) and in view of Patenaude and in further view of Flavin. AAPA teaches the basic structure of transporting Ethernet frames: from a Ethernet LAN to a PDH technology to a SDH-level to a PDH technology to a Ethernet LAN. Patenaude teaches mapping/demapping via GFP. Flavin teaches mapping and demapping at junction points between networks and outputting the results onto a second network.

Claim Objections

3. Claims 1 and 6 are objected to because of the following informalities: in claim 1 line 9 and in claim 6 line 4, it discloses "demapping the Ethernet frames..." It should be changed to "demapping the **mapped** Ethernet frames..." Appropriate correction is required.
4. Claim 2 is objected to because of the following informalities: claim 2, lines 2-3, states a junction point between the first Ethernet LAN and a first En-network. The

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Examiner will interpret claim 2, lines 2-3, as being, "...a junction point between the first Ethernet LAN and **the** first En-network" for examination hereinafter. Appropriate correction is required.

5. Claim 7 is objected to because of the following informalities: claim 7, line 2, states between the first LAN and a first En-network. The Examiner will interpret claim 2, line 2, as being, "...and **the** first En-network" for examination hereinafter. Appropriate correction is required.

6. Claim 8 is objected to because of the following informalities: claim 8, lines 2-3, states, the second En-network and a second LAN. The Examiner will interpret claim 2, lines 2-3, as being, "...the second En-network and **the** second LAN" for examination hereinafter. Appropriate correction is required.

Claim 3 is objected to because of the following informalities: "the second En-network" in the third line of claim 3. The Examiner will interpret the limitation as "a second En-network" that is positioned between the SDH-level network and the second Ethernet LAN for examination hereinafter.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1, 5, 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) and in further view of U.S. PGPub 2004/0076175 to Patenaude et al (hereinafter "Patenaude").

As per claim 1, AAPA teaches a method of transmitting Ethernet data frames from a first local area network (LAN) to a second local area network (LAN) comprising the steps of (Amended Background, lines 32-33, discloses transport of Ethernet frames between two different LANs; Amended Background line 11, discloses

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LANs being Ethernet. One of the two different LANs corresponds to a first Ethernet LAN and the other LAN is a second Ethernet LAN):

transmitting **Ethernet frames from the first local area network onto a Plesiochronous Digital Hierarchy (PDH) data stream and transmitting Ethernet Frames via a first En-network to a Synchronous Digital Hierarchy (SDH)-level network and receiving a transmission at the second local area network through the SDH-level network and transmitting frames into the second local area network** (Amended Background, lines 32-33, discloses transport of Ethernet frames between two different LANs; Amended Background line 11, discloses LANs being Ethernet; Amended Background lines 20-23, discloses transporting data between different networks using SDH; Amended Background lines 26-27, discloses PDH technology is an intermediate level between Ethernet LAN's and SDH-level. One of the two different LANs corresponds to a first Ethernet LAN and the other LAN is a second Ethernet LAN).

AAPA is silent on **mapping Ethernet frames from the first local area network onto a Plesiochronous Digital Hierarchy (PDH) data stream via a Generic Framing Procedure (GFP) and transmitting said mapped Ethernet frames via a first En-network to a Synchronous Digital Hierarchy (SDH)-level network and receiving the transmission at the second local area network through the SDH-level network and demapping the Ethernet frames from the first local area network via the Generic Framing Procedure and transmitting said demapped frames into the second local area network.**

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Patenaude teaches packets (frames) encapsulated (mapped) using generic framing procedure is mapped by packet mapper to a T3/E3 (PDH) data ([0027]). Also, Patenaude teaches packet data traffic would be mapped into one or more Ethernet packet connections to users ([0021]). Although not explicitly stated, since Patenaude teaches mapping packets using GFP and that users receive mapped Ethernet packets, it would have been obvious to demap the packets using GFP in order to use the packets.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify AAPA to have mapping Ethernet frames from the first local area network onto a Plesiochronous Digital Hierarchy (PDH) data stream via a Generic Framing Procedure (GFP) and transmitting said mapped Ethernet frames via a first En-network to a Synchronous Digital Hierarchy (SDH)-level network and receiving the transmission at the second local area network through the SDH-level network and demapping the Ethernet frames from the first local area network via the Generic Framing Procedure and transmitting said demapped frames into the second local area network, as suggested by Patenaude. This combination would benefit the system by providing one uniform mechanism to adapt any payload type to any transport media (Hussain pg. 10, reference listed in conclusion).

As per claim 5, AAPA teaches a system for transmitting Ethernet data frames from a first local area network to a second local area network, comprising (Amended Background, lines 32-33, discloses transport of Ethernet frames between two

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different LANs; Amended Background line 11, discloses LANs being Ethernet. One of the two different LANs corresponds to a first Ethernet LAN and the other LAN is a second Ethernet LAN):

Ethernet frames from the first local area network onto a Plesiochronous Digital Hierarchy (PDH) format and means for transmitting Ethernet frames via a first En-network to an SDH-level network (Amended Background, lines 32-33, discloses transport of Ethernet frames between two different LANs; Amended Background line 11, discloses LANs being Ethernet; Amended Background lines 20-23, discloses transporting data between different networks using SDH; Amended Background lines 26-27, discloses PDH technology is an intermediate level between Ethernet LAN's and SDH-level. One of the two different LANs corresponds to a first Ethernet LAN and the other LAN is a second Ethernet LAN).

AAPA is silent on **means for mapping Ethernet frames from the first local area network onto a Plesiochronous Digital Hierarchy (PDH) format via a Generic Framing Procedure (GFP) and means for transmitting said mapped Ethernet frames via a first En-network to an SDH-level network.**

Patenaude teaches packets (frames) encapsulated (mapped) using generic framing procedure is mapped by packet mapper to a T3/E3 (PDH) data ([0027]). Also, Patenaude teaches packet data traffic would be mapped into one or more Ethernet packet connections to users ([0021]). Although not explicitly stated, since Patenaude teaches mapping packets using GFP and that users receive mapped Ethernet packets,

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it would have been obvious to demap the packets using GFP in order to use the packets.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify AAPA to have means for mapping Ethernet frames from the first local area network onto a Plesiochronous Digital Hierarchy (PDH) format via a Generic Framing Procedure (GFP) and means for transmitting said mapped Ethernet frames via a first En-network to an SDH-level network, as suggested by Patenaude. This combination would benefit the system by providing one uniform mechanism to adapt any payload type to any transport media (Hussain pg. 10, reference listed in conclusion).

As per claim 6, the combination teaches the system of claim 5, additionally comprising means for:

receiving the transmission (AAPA, Amended Background, lines 32-33, discloses transport of Ethernet frames. Patenaude [0027], discloses mapped packets (frames)) **at the second local area network** (Amended Background, lines 32-33 and line 11) **through the SDH-level network** (AAPA, Amended Background lines 21-27) **via a second En-network** (AAPA, Amended Background lines 20-32),

demapping (Patenaude [0027] and [0021], although not explicitly stated, since Patenaude teaches mapping packets (frames) using GFP and that users receive mapped Ethernet packets (frames), it would have been obvious the users demap the packets (frames) using GFP in order to use the packets (frames)) **the Ethernet frames**

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from the first local area network (Amended Background, lines 32-33 and line 11) **via Generic Framing Procedure** (Patenaude [0027]),

and transmitting (AAPA, Amended Background lines 32-33 , discloses transport of Ethernet frames) **said demapped frames** (Patenaude [0027] and [0021], although not explicitly stated, since Patenaude teaches mapping packets (frames) using GFP and that users receive mapped Ethernet packets (frames), it would have been obvious the users demap the packets (frames) using GFP in order to use the packets (frames)) **into the second local area network** (Amended Background, lines 32-33 and line 11).

Examiner provides the same rationale for the combination as stated in claim 5.

As per claim 10, the combination teaches **the system of claim 5, wherein the first and second LANs are Ethernet LANs** (AAPA, Amended Background line 11 and lines 32-33).

11. Claims 2-4 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA and Patenaude and in further view of EP 1 229 692 to Flavin et al (hereinafter "Flavin").

As per claim 2, the combination teaches **the method of claim 1**.

Although the combination teaches **wherein the first and second LANs are Ethernet LANs** (AAPA, Amended Background line 11 and lines 32-33) and **mapping** (Patenaude [0027]) and **first En-network** (AAPA, Amended Background lines 20-33),

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the combination is silent on **wherein said mapping is carried out at a junction point between the first Ethernet LAN and a first En-network.**

However, Flavin discloses mapping at a first node (i.e. a junction point), being disposed between a first network and an intermediate network (pg. 3 lines 36-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination to have wherein the first and second LANs are Ethernet LANs, and wherein said mapping is carried out at a junction point between the first Ethernet LAN and a the first En-network, as suggested by Flavin. This combination would benefit the system by enabling a tunneling of a frame from a first network to a second network (Flavin [0011]).

As per claim 3, the combination teaches the method of claim 1.

Although the combination teaches **wherein the first and second LANs are Ethernet LANs** (AAPA, Amended Background line 11 and lines 32-33) and **demapping** (Patenaude [0027] and [0021]) and **second En-network** (AAPA, Amended Background lines 20-33), the combination is silent on **wherein said demapping is carried out at a junction point between the second En-network and the second Ethernet LAN.**

However, Flavin discloses at a second node (i.e. a junction point), being disposed between a second network and an intermediate network and at said second node, reassembling (demapping) a frame (pg. 3 lines 36-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination to have wherein the first and second

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LANs are Ethernet LANs, and wherein said demapping is carried out at a junction point between the second En-network and the second Ethernet LAN, as suggested by Flavin. This combination would benefit the system by enabling a tunneling of a frame from a first network to a second network (Flavin [0011]).

As per claim 4, the combination teaches the method of claim 1.

Although the combination teaches **the transport of the GFP frames (AAPA, Amended Background, lines 32-33. Patenaude [0027]) through the SDH-network (AAPA Amended Background lines 20-33), the combination is silent on transport of the GFP frames through the SDH-network is carried out using virtual containers (VCx-containers).**

However, Flavin teaches a virtual container is the basic payload carrying unit in SDH (pg. 6 line 11) and virtual containers, VC-x, may be transported in the SDH frame as data packets and where x indicates the size of the virtual containers, for example VC-4, VC-3 or VC-11 (pg. 6 lines 14-29). Examiner correspond VC-x to applicant's VCx-containers.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination to have the transport of the GFP frames through the SDH-network is carried out using virtual containers (VCx-containers), as suggested by Flavin. This combination would benefit the system by having generic and all-purpose transport containers for transporting data since it is the basic payload carrying unit in SDH.

As per claim 7, the combination teaches the system of claim 5.

Although the combination teaches **mapping** (Patenaude [0027]), **first LAN** (Amended Background, lines 32-33 and line 11) and **first En-network** (AAPA, Amended Background lines 20-33), the combination is silent on **in which the means for said mapping is arranged at a junction point between the first Ethernet LAN and a first En-network.**

However, Flavin discloses mapping at a first node (i.e. a junction point), being disposed between a first network and an intermediate network (pg. 3 lines 36-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination to have in which the means for said mapping is arranged at a junction point between the first Ethernet LAN and a first En-network, as suggested by Flavin. This combination would benefit the system by enabling a tunneling of a frame from a first network to a second network (Flavin [0011]).

As per claim 8, the combination teaches the system of claim 6.

Although the combination teaches **demapping** (Patenaude [0027] and [0021]), **second En-network** (AAPA, Amended Background lines 20-33) and **a second LAN** (Amended Background, lines 32-33 and line 11), the combination is silent on **according to which said means for demapping is arranged at a junction point between the second En-network and a second LAN.**

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However, Flavin discloses at a second node (i.e. a junction point), being disposed between a second network and an intermediate network and at said second node, reassembling (demapping) a frame (pg. 3 lines 36-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination to have according to which said means for demapping is arranged at a junction point between the second En-network and a second LAN, as suggested by Flavin. This combination would benefit the system by enabling a tunneling of a frame from a first network to a second network (Flavin [0011]).

As per claim 9, the combination teaches the system of claim 5.

Although the combination teaches **the transport of the GFP frames (AAPA, Amended Background, lines 32-33. Patenaude [0027]) through the SDH-network (AAPA Amended Background lines 20-33), the combination is silent on the transport of the GFP frames though the SDH-network is carried out by means of so called virtual containers, VCx-containers.**

However, Flavin teaches a virtual container is the basic payload carrying unit in SDH (pg. 6 line 11) and virtual containers, VC-x, may be transported in the SDH frame as data packets and where x indicates the size of the virtual containers, for example VC-4, VC-3 or VC-11 (pg. 6 lines 14-29). Examiner correspond VC-x to applicant's VCx-containers.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the combination to have the transport of the GFP frames

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though the SDH-network is carried out by means of so called virtual containers, VCx-containers, as suggested by Flavin. This combination would benefit the system by having generic and all-purpose transport containers for transporting data since it is the basic payload carrying unit in SDH.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hussain et al. "Generic framing procedure ITU-T G.7041" Electronic Products Solutions Group Telecomms Networks Test Division. Printed July 23, 2002.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER CHAU whose telephone number is (571)270-7152. The examiner can normally be reached on Monday-Friday 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571-272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/P. C./

Examiner, Art Unit 2419

/Ronald Abelson/

Primary Examiner, Art Unit 2419